Flight
Advanced
Strike
TACF-02
T-45C
Mission

PRACTICE TACTICAL FORMATION FLYING

TACF-02

ORM

- **Operational Requirements / Limitations**
  - **Crew Rest / Crew Day / Work Week**
  - **R&I**
  - **IP Currency (SOP)**
  - **Warm Up Eligibility**
  - **Previous Flight Incomplete? Determine Graded Items.**
- **Human Factors**
  - **Life Stressors / External Factors / Personal Problems**
  - **Medical Status (Rest / Nourishment / Hydration)**
- **Hazards and Controls**
  - **Routine**
  - **Weather**
    - **Current Observations and Forecasts**
    - **Crosswinds**
    - **Fuel Considerations**
  - **Mission Specific**

ADMIN

TACF-02

- **QOD**
  - NATOPS
  - EP
  - SOP

Flight Brief

TACF-02

- **Brief**
  - a. QOD (NATOPS / EP / SOP)
  - b. KIO Procedures
  - c. Unknown airspeed rendezvous
- **Introduce**
  - a. Off-heading shackle turns
  - b. Loose deuce exercise
  - c. Displacement roll / reversal
- **Practice**
  - a. Combat checks
  - b. Voice communications
  - c. Formation
  - d. Defensive combat spread
  - e. Check turns
  - f. Shackle turns
  - g. Cruise turns
  - h. Tactical turns
  - i. In-Place turns
  - j. Cross turns
  - k. Unknown airspeed rendezvous
  - l. Gunsight tracking exercise (fuel permitting)
  - m. Situational awareness
  - n. Lead (if flown)
  - o. Touch and go landings

Notes:

TACF-02

- **If the “Gunsight tracking exercise: has been performed on either TACF-01 or TACF-02, it will be performed as a “Practice” item on TACF-03. If not previously performed, it will be introduced on TACF-03.**

Combat Spread

TACF-02

– **What is it?**

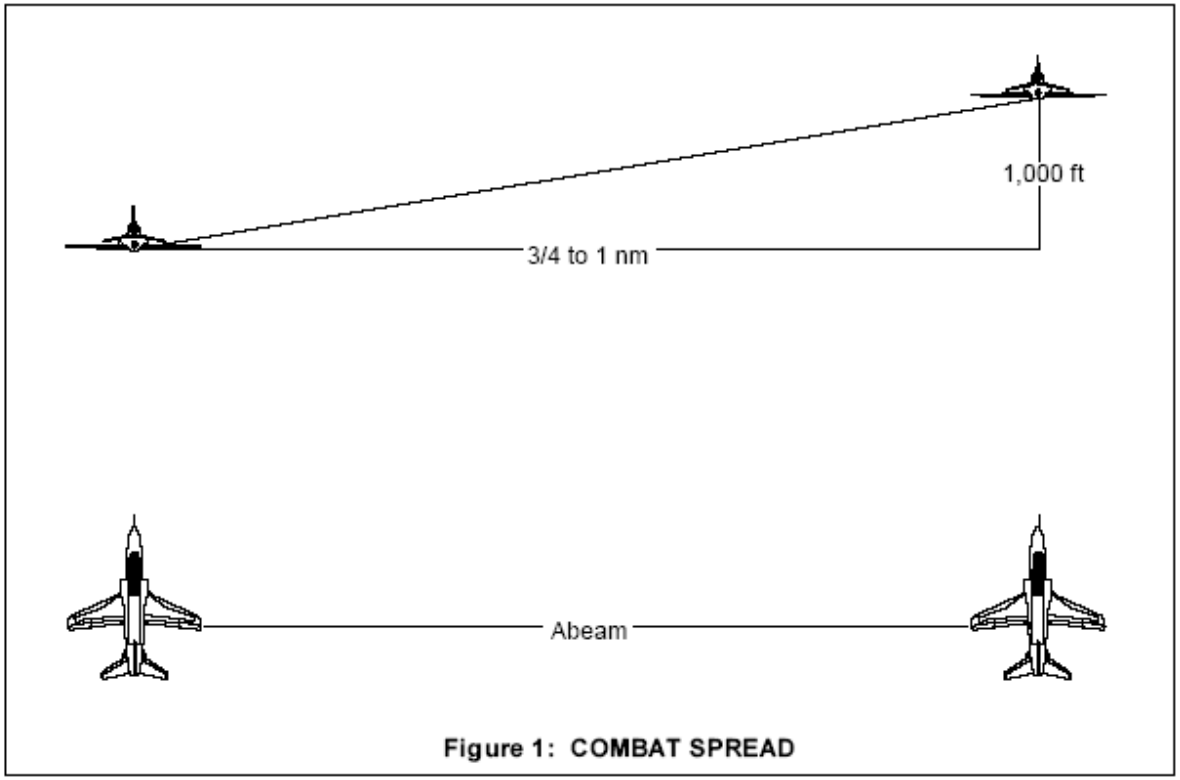


Figure 1: COMBAT SPREAD

– **How to get there**

- **Check your heading, generate an airspeed advantage, and take a 10-15° cut away from the lead.**

Maintaining Combat Spread

TACF-02

- **Priorities**
  - **1. Bearing Line**
    - **Airspeed dependent(may need to account for a 5 kt TAS difference with 1000’ of altitude difference)**
  - **2. Abeam distance**
  - **3. Altitude**

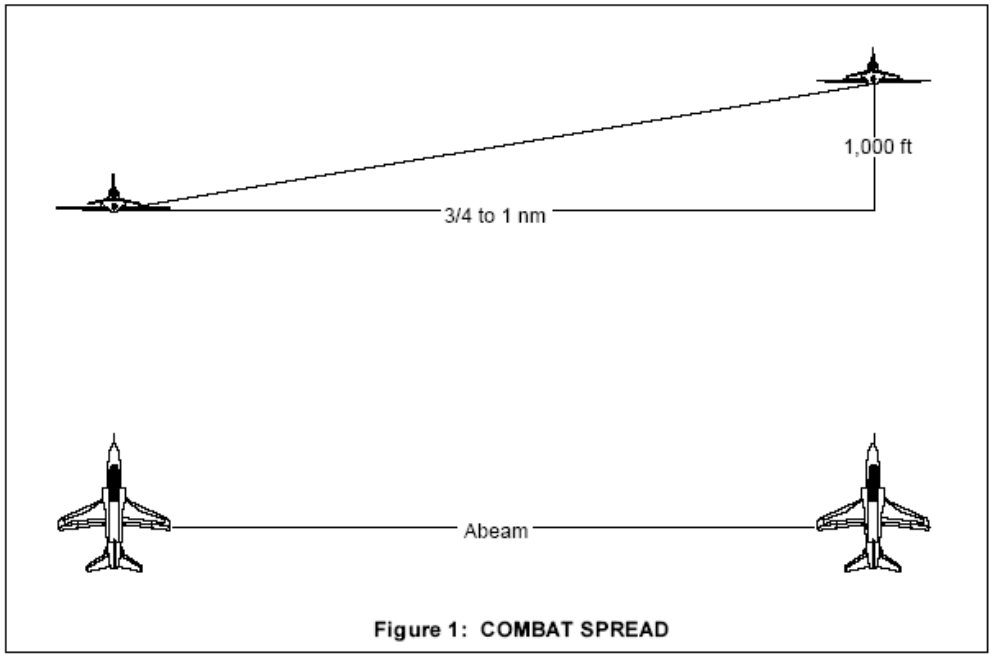


Figure 1: COMBAT SPREAD

Combat Spread Corrections

TACF-02

- **If Sucked**
  - **Wingman needs to accelerate to reach bearing line-power, unload.**
- **If Acute**
  - **Wingman needs to decelerate. Different techniques available. (Climb to decelerate or maintain altitude and take a cut away and then back to slow downrange travel)**
- **If wide or acute,**
  - **Wingman needs to toward or away as appropriate. Care should be given to add enough airspeed and not to turn too much, as doing so will trade the wingman's abeam or wide for a sucked position.**

Check Turns

TACF-02

- **Into**
  - **Turn will make you acute.**
  - **Multiple techniques to fix position.**
  - **Big Picture: Slow your down range travel compared to lead, then fix your altitude and abeam distance.**
- **Away**
  - **Turn will make you sucked.**
  - **Big Picture: Increase your down range travel compared to the lead (ie. lower your nose and increase your airspeed), then fix your altitude and abeam distance.**

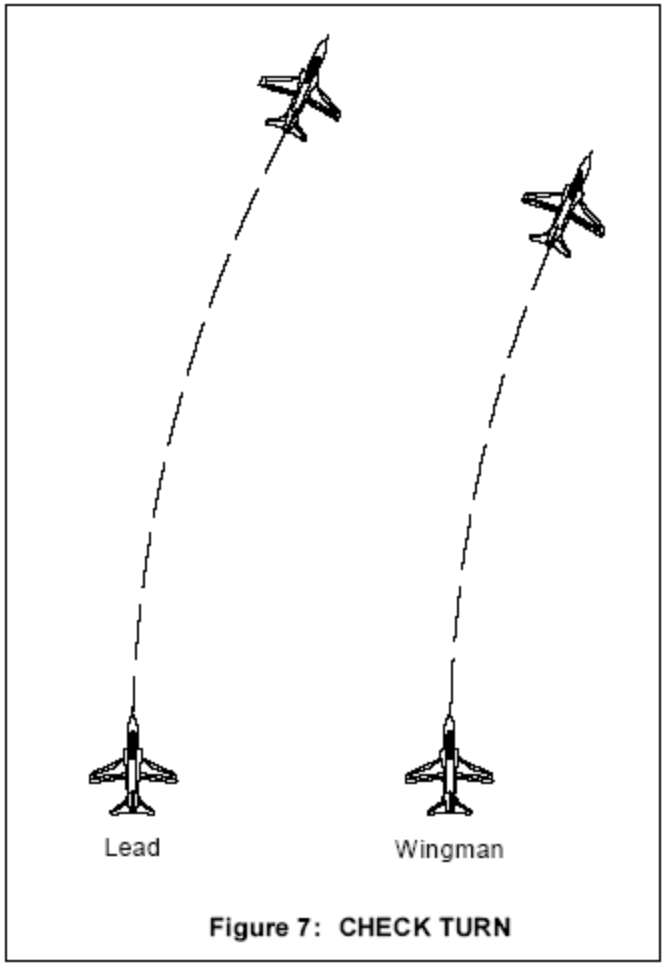


Figure 7: CHECK TURN

Check Turns

TACF-02

- **Into**
  - **Turn will make you acute.**
  - **Multiple techniques to fix position.**
  - **Big Picture: Slow your down range travel compared to lead, then fix your altitude and abeam distance.**
- **Away**
  - **Turn will make you sucked.**
  - **Big Picture: Increase your down range travel compared to the lead (ie. lower your nose and increase your airspeed), then fix your altitude and abeam distance.**

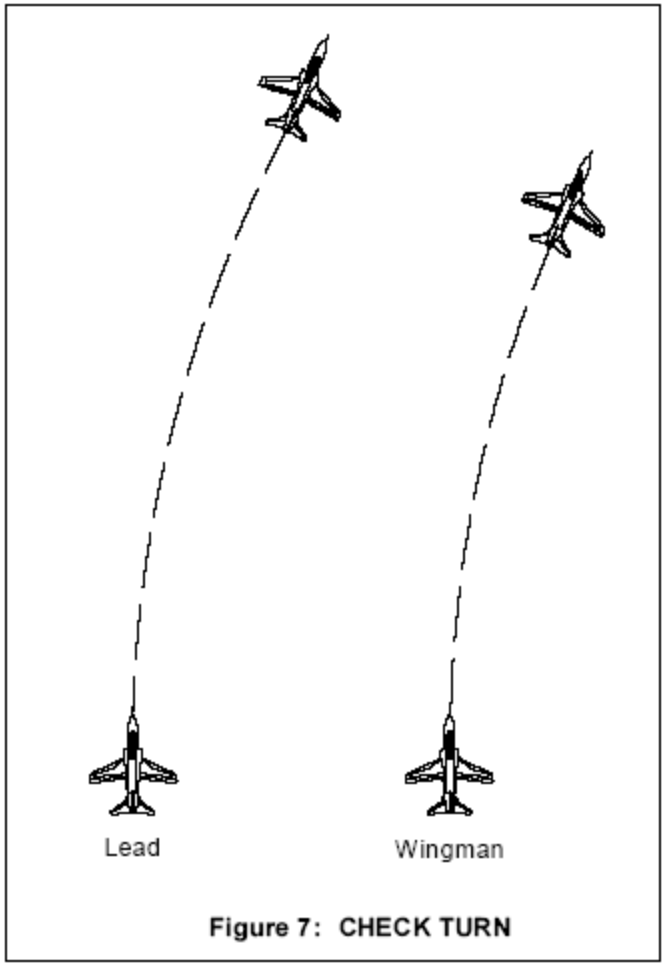


Figure 7: CHECK TURN

Tactical Turns

TACF-02

- **Into**
  - **Wait until looking down lead's intakes.**
  - **Start a level 14 unit pull to the new heading while maintaining 300 kts.**
  - **Adjust timing of turn, amount of pull, and airspeed as necessary to come out of turn in position.**
- **Away**
  - **Start a level 14 unit pull to the new heading while maintaining 300 kts.**
  - **Make adjustments to fix positioning.**

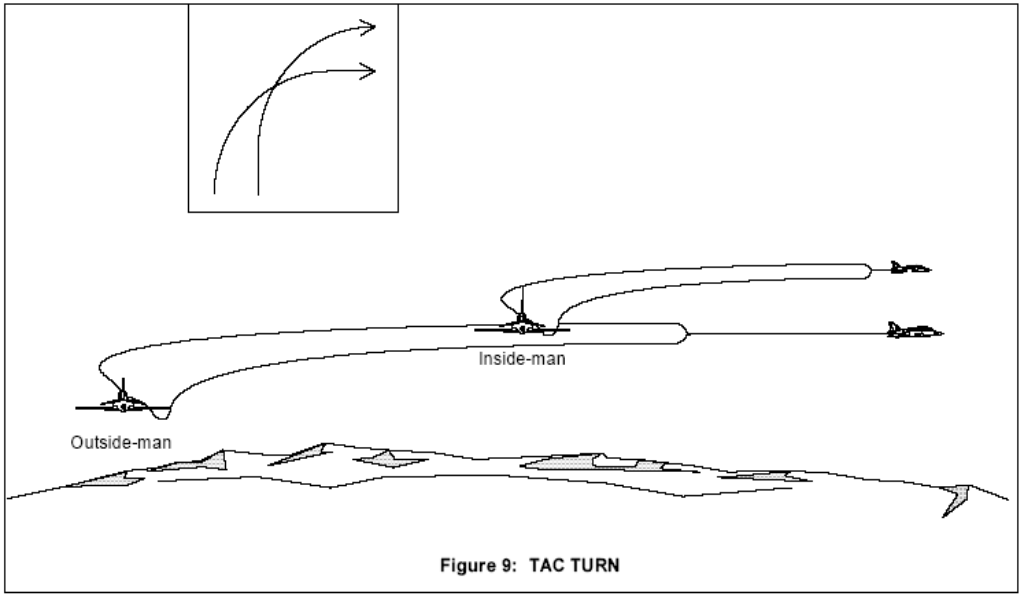


Figure 9: TAC TURN

In-Place Turns

TACF-02

- **Into**
  - **Make a level 14 unit turn for 180°, maintain 300 kts.**
  - **Corrections for sucked / acute start.**

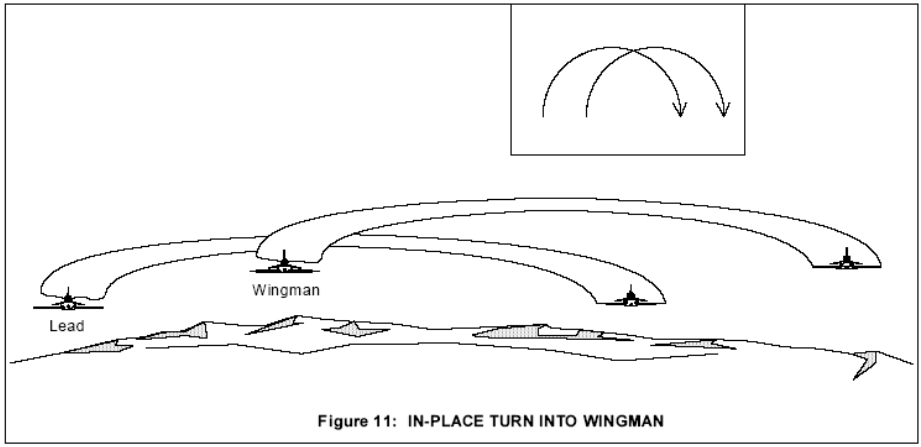


Figure 11: IN-PLACE TURN INTO WINGMAN

- **Away**
  - **Make a level 14 unit turn for 180°, maintain 300 kts.**
  - **Corrections for sucked / acute start.**
  - **Do <u>NOT</u> float the turn when belly up to lead!**

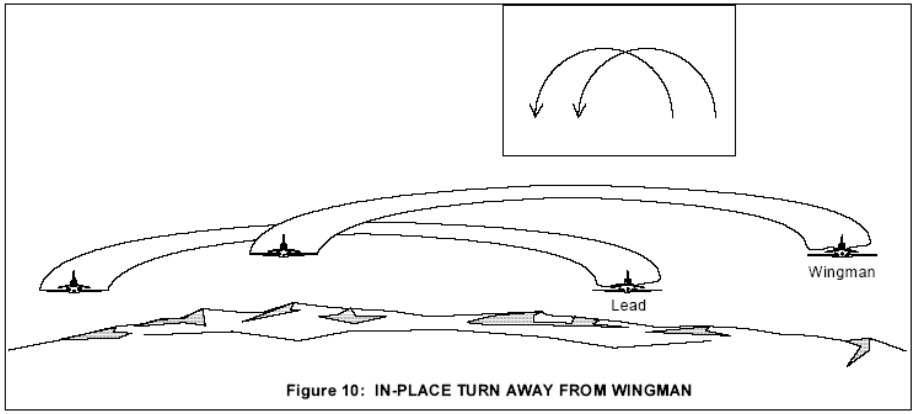
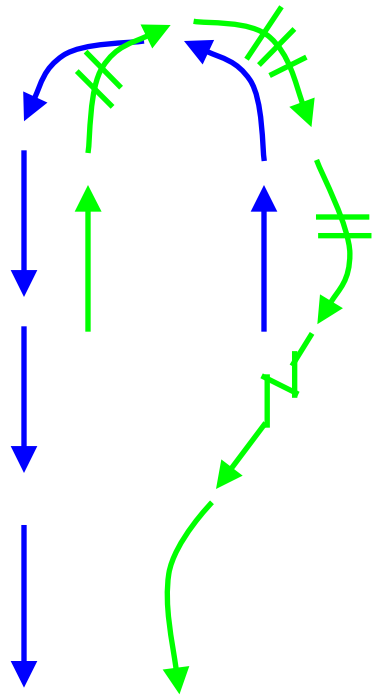


Figure 10: IN-PLACE TURN AWAY FROM WINGMAN

Cross Turns

TACF-02

- **17 unit, nibble of buffet pull into lead.**
- **Must maintain 500’ of separation from lead. Overbank to 135deg after flight cross.**
- **Use altitude to gain an airspeed advantage and fix your position.**
- **Corrections for sucked / acute start.**



Shackle Turns

TACF-02

- **14 unit level turn into lead, putting the original heading on the 45° benchmark (or as appropriate to help fix your position).**
- **Maintain 300 kts keeping altitude separation from lead.**
- **Wait approx 2 sec then pull 14 units back to the original heading. (Corrections for sucked / acute.**

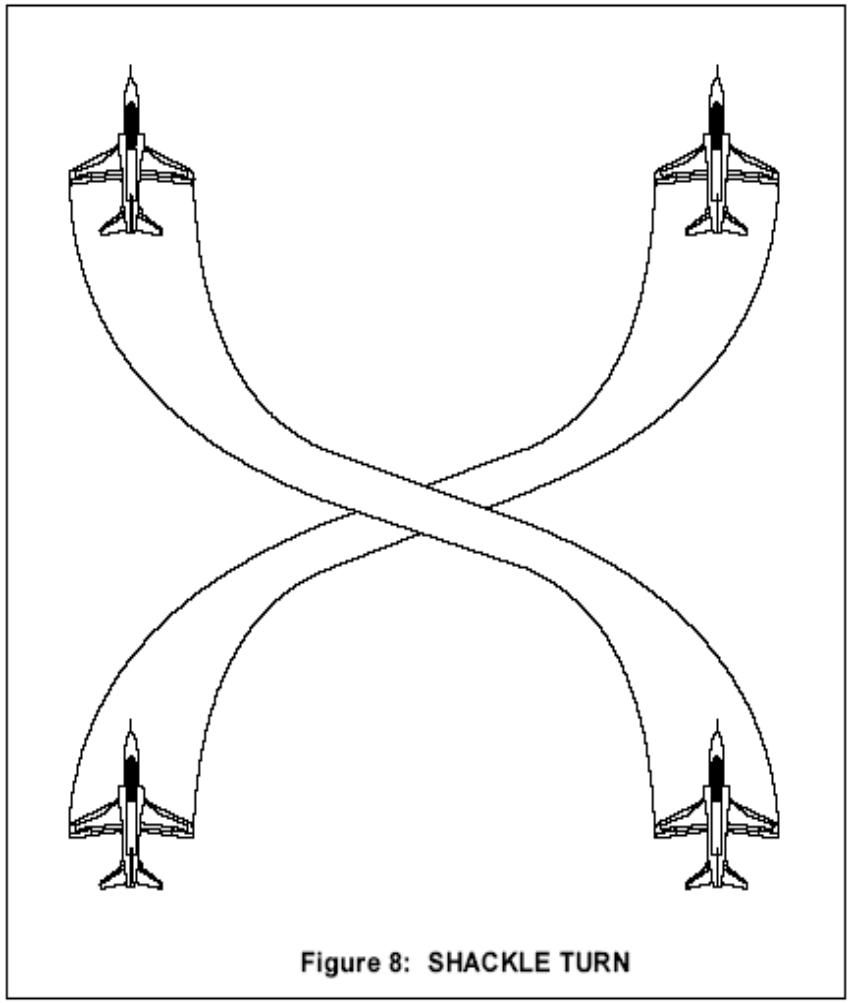


Figure 8: SHACKLE TURN

Off Heading Shackle Turns

TACF-02

- **Turn to 45° past eventual heading.**
- **If wingman’s turn is less than 45°, delay reversal.**
- **If wingman’s turn is greater than 45°, then reverse upon reaching reversal heading.**

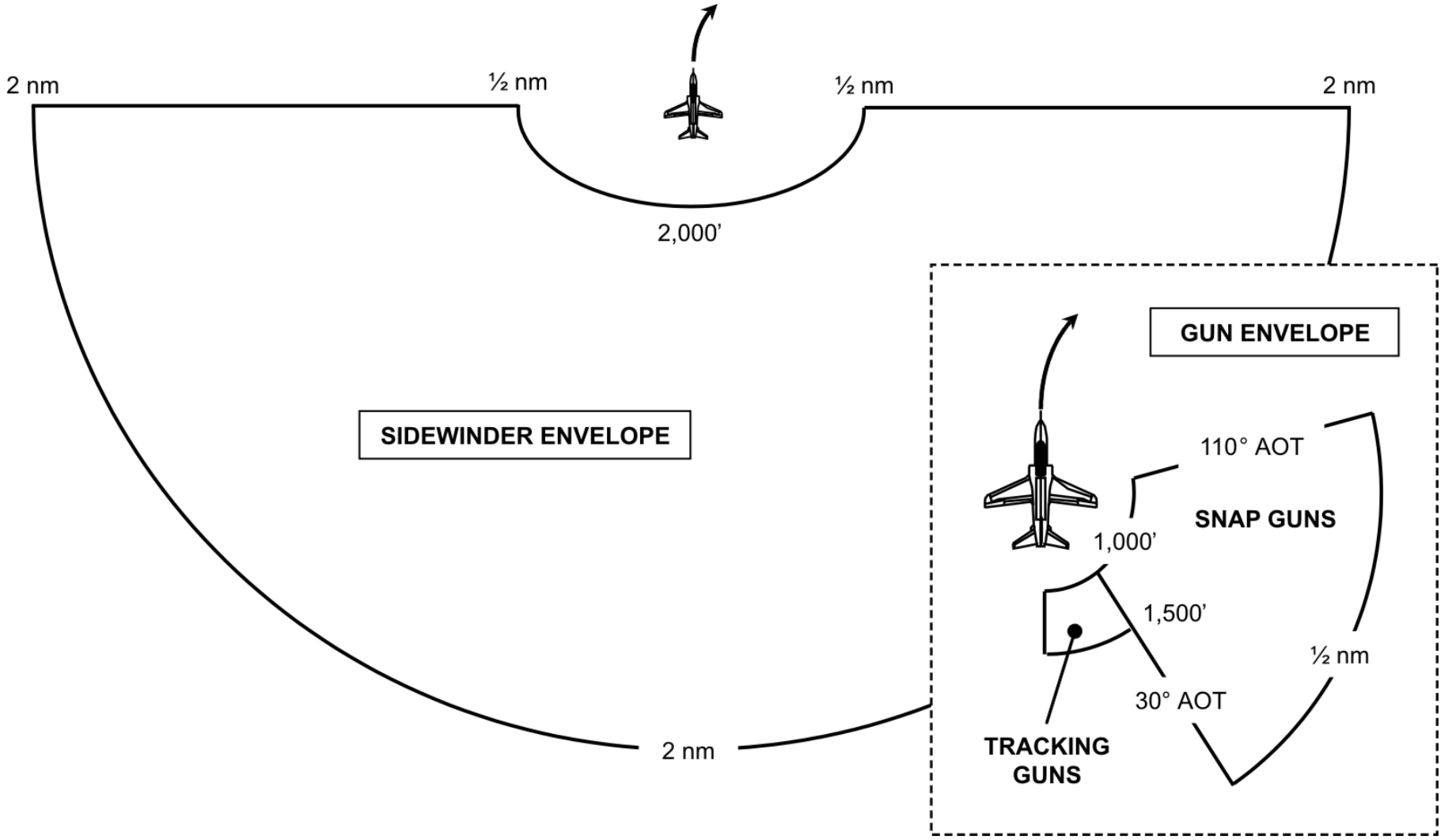
Loose Deuce

TACF-02

- **Started with a Tac turn into the wing.**
- **Before it is time for wing to turn, lead will call break turn with the bandit at the wing's 5 or 7 o'clock high. Wing should make a hard turn into the bandit.**
- **Lead tells wing to reverse and calls out his position.**
- **Use a series of High and Low Yo-Yo's to remain in position behind the lead, while keeping a good energy package on the aircraft. Report High Cover and Low Cover as appropriate.**
- **Trunk IP will call for a reversal, lead will reverse when wing reports "Roger reverse".**
- **If at low cover, wing turns with lead and moves to high cover at appropriate time. If at high cover, perform either a displacement roll or a reversal as appropriate.**
- **When trunk IP decides, swap roles.**

Weapons Envelope

TACF-02



Unknown Airspeed Rendezvous

TACF-02

- **Continue flying good Tacform until Fenced Out (Master Arm off with Gun deselected and the HUD back in the normal mode) and cleared to join by the lead.**
  - **When joining, make the rendezvous look like one that you have practiced before.**
  - **Lead will be setting the power and turning to put the RTB heading on the nose.**
  - **The join will be either a running rendezvous, CV rendezvous, or a combination.**

TACF-02

COORDINATION BRIEF

- **All members of flight required to attend the rest of the brief**

TACF-02

ORM

- **Operational Requirements / Limitations**
  - **Crew Rest / Crew Day / Work Week**
  - **R&I**
  - **IP Currency (SOP)**
  - **Warm Up Eligibility**
  - **Previous Flight Incomplete? Determine Graded Items.**
- **Human Factors**
  - **Life Stressors / External Factors / Personal Problems**
  - **Medical Status (Rest / Nourishment / Hydration)**
- **Hazards and Controls**
  - **Routine**
  - **Weather**
    - **Current Observations and Forecasts**
    - **Crosswinds**
    - **Fuel Considerations**
  - **Mission Specific**

TACF-02

TTO

- **Who will call a TTO?**
- **What situations will the TTO be called?**
  - **Safety**
  - **Confusion / Misunderstanding**
- **IP Responsibilities**
  - **Recognize need for TTO**
  - **Explanation / Instruction as necessary**
  - **Documentation on ATF**
- **When and how will training resume?**

TACF-02

ADMIN (card)

- **A/C - ATC C/S - Tactical C/S - Crew**
- **Brief / Walk / Marshal / Takeoff / Land Times**
- **ATC Clearance / IFF**
- **Area**
- **Line / T/O / Abort / RPM**
- **Comm Plan - Tac**
- **Nav Plan**
- **LCLS**
- **Joker / Bingo**

ADMIN

TACF-02

- **Launch**
  - **Weather**
  - **Preflight / Start / Marshal / Taxi**
  - **T/O / Rdvs**
  - **Formation**
  - **Transit (Admin Cruise) / (ATC Spread)**
  - **RadAlt Usage**
- **RTB**
  - **Form**
  - **Recovery**
  - **Diverts**
  - **NOTAM’s**

Tac Admin

TACF-02

Fence Checks

Initiated by Wing

G’s and Fuel –

Between Loose Deuce and GST

Knock It Offs –

Maintain Visual and fly to combat spread.

Conduct

TACF-02

- **Press to Combat Spread**
- **G-Warm**
- **Check Turns**
- **Shackle Turns**
- **Off Heading Shackles**
- **Cruise Turns**
- **Tac Turns**
- **In-Place Turns**
- **Cross Turns**
- **Loose Deuce**
- **Gunsight Tracking (fuel permitting)**

- **LEAD RESERVES THE RIGHT TO DO ANY TURN AT ANY TIME FOR AREA MANAGEMENT!**

Emergencies

TACF-02

- **Ground Emergencies**
- **Abort**
- **Rwy Dep / Gnd Ejection**
- **Radio/ICS failure**
- **Loss of Navaids**
- **Lost Plane / Lost Sight**
- **System Failures**
- **Disorientation**
- **Bird strike/ Midair**
- **SAR procedures**
- **Ejection**
- **Aircrew Coordination**
- **Underrun**

TACF-02

Recap

- **Overall Flow**
- **Questions**

STANDARD DEBRIEFING FORMAT

TACF-02

- The Flight Lead or Pilot-in-Command is responsible for ensuring all flight or crewmembers are thoroughly debriefed on the conduct of the mission utilizing the “S-P-B-E-MS-LL” format outlined below. (Refer to the CTW-1/CTW-2 Expanding Debriefing Guide for specific objectives).

I. Safety
II. Planning
III. Brief
IV. Execution
V. Mission Success
VI. Lessons Learned